

ENTERED



PCT10

RAW SEQUENCE LISTING

DATE: 05/29/2002

PATENT APPLICATION: US/10/031,691

TIME: 11:43:48

Input Set : A:\20499P - SeqList.txt

Output Set: N:\CRF3\05292002\J031691.raw

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4 <110> APPLICANT: Uebele, Victor N.
5       Swanson, Richard J.
6       Liu, Yuan
7       Lagrutta, Armando
9 <120> TITLE OF INVENTION: NOVEL HUMAN CALCIUM SENSITIVE POTASSIUM
10      CHANNEL
12 <130> FILE REFERENCE: 20499P
14 <140> CURRENT APPLICATION NUMBER: 10/031,691
15 <141> CURRENT FILING DATE: 2002-01-22
17 <150> PRIOR APPLICATION NUMBER: PCT/US00/19585
18 <151> PRIOR FILING DATE: 2000-07-18
20 <150> PRIOR APPLICATION NUMBER: 60/144,764
21 <151> PRIOR FILING DATE: 1999-07-20
23 <160> NUMBER OF SEQ ID NOS: 20
25 <170> SOFTWARE: FastSEQ for Windows Version 4.0
27 <210> SEQ ID NO: 1
28 <211> LENGTH: 1184
29 <212> TYPE: DNA
30 <213> ORGANISM: Human
32 <400> SEQUENCE: 1
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34 ttggaaagaa ctgagagaaa gagcaacaaa ggcgcgagtg gtgtgagagg gcagcacgcg      120
35 ctgtggggcc cttccagaga aatgtactga aaaagtctac gcaatgtctg ggatttgcta      180
36 aacaatacct ggaaagcaga caggtttttt tgccattcct ccaggacatc caccataagg      240
37 aaaggagacc ctggaccaac attctctaag atgtttatat ggaccagtgg ccggacctct      300
38 tcatcttata gacatgatga aaaaagaaat atttaccaga aaatcaggga ccatgacctc      360
39 ctggacaaaa ggaaaacagt cacagcactg aaggcaggag aggaccgagc tattctcctg      420
40 ggactggcta tgatggtgtg ctccatcatg atgtattttc tgctgggaat cacactcctg      480
41 cgctcatata tgcagagcgt gtggaccgaa gagtctcaat gcaccttgct gaatgcgtcc      540
42 atcacggaag catttaactg ctcccttcagc tgtggtccag actgctggaa actttctcag      600
43 tacccttgcc tccaggtgta cgttaacctg acttcttcctg gggaaaagct cctcctctac      660
44 cacacagaag agacaataaa aatcaatcag aagtgtcct atatacctaa atgtggaaaa      720
45 aattttgaag aatccatgtc cctggtgaat gttgtcatgg aaaacttcag gaagtatcaa      780
46 cacttctcct gctattctga ccagaaagga aaccagaaga gtgttatcct aaccaaactc      840
47 tacagttcca acgtgctgtt ccattcactc ttctggccaa cctgtatgat ggctgggggt      900
48 gtggcaattg ttgccatggt gaaacttaca cagtacctct ccctactatg tgagaggatc      960
49 caacggatca atagataaat gcaaaaatgg ataaaataat ttttgtaaa gctcaaatac     1020
50 tgttttcttt cattcttcac caaagaacct taagtttgta acgtgcagtc tgttatgagt     1080
51 tccctaatat attcttatat gtagagcaat aatgcaaaag ctgttctata tgcaaacatg     1140
52 atgtctttat tattcaggag aataaataac tgttttgtgt tgaa                        1184
54 <210> SEQ ID NO: 2
55 <211> LENGTH: 235
56 <212> TYPE: PRT

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57 <213> ORGANISM: Homo Sapiens

59 <400> SEQUENCE: 2

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60 Met Phe Ile Trp Thr Ser Gly Arg Thr Ser Ser Ser Tyr Arg His Asp
61 1 5 10 15
62 Glu Lys Arg Asn Ile Tyr Gln Lys Ile Arg Asp His Asp Leu Leu Asp
63 20 25 30
64 Lys Arg Lys Thr Val Thr Ala Leu Lys Ala Gly Glu Asp Arg Ala Ile
65 35 40 45
66 Leu Leu Gly Leu Ala Met Met Val Cys Ser Ile Met Met Tyr Phe Leu
67 50 55 60
68 Leu Gly Ile Thr Leu Leu Arg Ser Tyr Met Gln Ser Val Trp Thr Glu
69 65 70 75 80
70 Glu Ser Gln Cys Thr Leu Leu Asn Ala Ser Ile Thr Glu Thr Phe Asn
71 85 90 95
72 Cys Ser Phe Ser Cys Gly Pro Asp Cys Trp Lys Leu Ser Gln Tyr Pro
73 100 105 110
74 Cys Leu Gln Val Tyr Val Asn Leu Thr Ser Ser Gly Glu Lys Leu Leu
75 115 120 125
76 Leu Tyr His Thr Glu Glu Thr Ile Lys Ile Asn Gln Lys Cys Ser Tyr
77 130 135 140
78 Ile Pro Lys Cys Gly Lys Asn Phe Glu Glu Ser Met Ser Leu Val Asn
79 145 150 155 160
80 Val Val Met Glu Asn Phe Arg Lys Tyr Gln His Phe Ser Cys Tyr Ser
81 165 170 175
82 Asp Pro Glu Gly Asn Gln Lys Ser Val Ile Leu Thr Lys Leu Tyr Ser
83 180 185 190
84 Ser Asn Val Leu Phe His Ser Leu Phe Trp Pro Thr Cys Met Met Ala
85 195 200 205
86 Gly Gly Val Ala Ile Val Ala Met Val Lys Leu Thr Gln Tyr Leu Ser
87 210 215 220
88 Leu Leu Cys Glu Arg Ile Gln Arg Ile Asn Arg
89 225 230 235

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91 <210> SEQ ID NO: 3

92 <211> LENGTH: 1237

93 <212> TYPE: DNA

94 <213> ORGANISM: Human

96 <400> SEQUENCE: 3

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97 gctcccggct gccgagcgcc aaacacaggt gatgaggtgg cggcaagcac agtgcaaaga 60
98 gagagaagca gcttcggctg cagcaaacca cgcaggtcct tcttgatcat ctagaactga 120
99 ccgctccgcc ttgccaggag tctgcagaac cacgtggctg gcctgcctga agttctcacc 180
100 tctctaggaa ggcggggggc ttctaattggc tgcagctgcg ctgggggctg ggggctcccg 240
101 ctgggactcc acttcctgtg atgtctaagc ttcacctttc ttgcgcccgc aggggcatga 300
102 ctcaagtgaa agggagccat tttctcagac ccctggcctc atgcagccct tcagcatccc 360
103 cgtgcaaadc acacttcagg gcagccggag gcgcccgggg aggacagcct ttctgcctc 420
104 agggagaaga agagagacag actacagtga tggagaccca ctatagtgtc acaagaggct 480
105 gccatccagt actggagagg accgagccgt gatgctgggg tttgccatga tgggcttctc 540
106 agtctaatg tttctcttgc tcggaacaac cattctaaag ctttttatgc tcagcattca 600
107 gagagaagaa tcgacctgca ctgccatoca cacagatata atggacgact ggctggactg 660
108 tgcttccacc tgtggtgtgc actgccacgg tcagggaag taccctgtgc ttcagggtgt 720

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109 tgtgaacctc agccatccag gtcagaaaag tctcctacat tataatgaag aggctgtcca      780
110 gataaatccc aagtgtcttt acacacctaa gtgccaccaa gatagaagtg atttgtctca      840
111 cagtgtctctg gacataaaaag aattcttcga tcacaaaaat ggaaccccct ttctatgctt      900
112 ctacagtcca gccagccaat ctgaagatgt cattcttata aaaaagtatg accaaatggc      960
113 tatcttccac tgtttatttt ggccttcaact gactctgcta ggtggtgccc tgattgttgg      1020
114 catggtgaga ttaacacaac acctgtcctt actgtgtgaa aaatatagca ctgtagtcag      1080
115 agatgaggta ggtggaaaag taccttatat agaacagcat cagttcaaac tgtgcattat      1140
116 gaggaggagc aaaggaagag cagagaaaatc ttaagacggt ggccaaatta aagtgtctggc      1200
117 cttcagatgt ctgtgatttc tgcaactcga gtatgcg      1237

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119 <210> SEQ ID NO: 4

120 <211> LENGTH: 277

121 <212> TYPE: PRT

122 <213> ORGANISM: Homo Sapiens

124 <400> SEQUENCE: 4

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125 Met Gln Pro Phe Ser Ile Pro Val Gln Ile Thr Leu Gln Gly Ser Arg
126 1 5 10 15
127 Arg Arg Gln Gly Arg Thr Ala Phe Pro Ala Ser Gly Lys Lys Arg Glu
128 20 25 30
129 Thr Asp Tyr Ser Asp Gly Asp Pro Leu Asp Val His Lys Arg Leu Pro
130 35 40 45
131 Ser Ser Thr Gly Glu Asp Arg Ala Val Met Leu Gly Phe Ala Met Met
132 50 55 60
133 Gly Phe Ser Val Leu Met Phe Phe Leu Leu Gly Thr Thr Ile Leu Lys
134 65 70 75 80
135 Pro Phe Met Leu Ser Ile Gln Arg Glu Glu Ser Thr Cys Thr Ala Ile
136 85 90 95
137 His Thr Asp Ile Met Asp Asp Trp Leu Asp Cys Ala Phe Thr Cys Gly
138 100 105 110
139 Val His Cys His Gly Gln Gly Lys Tyr Pro Cys Leu Gln Val Phe Val
140 115 120 125
141 Asn Leu Ser His Pro Gly Gln Lys Ala Leu Leu His Tyr Asn Glu Glu
142 130 135 140
143 Ala Val Gln Ile Asn Pro Lys Cys Phe Tyr Thr Pro Lys Cys His Gln
144 145 150 155 160
145 Asp Arg Ser Asp Leu Leu Asn Ser Ala Leu Asp Ile Lys Glu Phe Phe
146 165 170 175
147 Asp His Lys Asn Gly Thr Pro Phe Ser Cys Phe Tyr Ser Pro Ala Ser
148 180 185 190
149 Gln Ser Glu Asp Val Ile Leu Ile Lys Lys Tyr Asp Gln Met Ala Ile
150 195 200 205
151 Phe His Cys Leu Phe Trp Pro Ser Leu Thr Leu Leu Gly Gly Ala Leu
152 210 215 220
153 Ile Val Gly Met Val Arg Leu Thr Gln His Leu Ser Leu Leu Cys Glu
154 225 230 235 240
155 Lys Tyr Ser Thr Val Val Arg Asp Glu Val Gly Gly Lys Val Pro Tyr
156 245 250 255
157 Ile Glu Gln His Gln Phe Lys Leu Cys Ile Met Arg Arg Ser Lys Gly
158 260 265 270
159 Arg Ala Glu Lys Ser

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160          275
162 <210> SEQ ID NO: 5
163 <211> LENGTH: 1632
164 <212> TYPE: DNA
165 <213> ORGANISM: Human
167 <400> SEQUENCE: 5
168 aagagaaaaga acaagaaaaa gaaaaagaag aggaaaaaat cccaggtacc catagaaacc      60
169 cttaaagatg tttaaaaaga gttaacttat cagaacacag atttaagtga aattaaggaa      120
170 gaagagcagg taaagtctac tgacagaaaag tcagcagtgagg aagcccaaaa cgaggtgact      180
171 gaaaatccaa aacagaaaat tgcagcagaa agcagtgaaa atgctgattg tccagagaat      240
172 cctaaaatga agttggatgg aaaacttgac caagaaggca atgatgtaaa aacagcagct      300
173 gaggaggtac tagctggtag agacacatta gattttgagg atgtcacagt tcaatcatca      360
174 ggcccagagg ctggtggtga agaattagat gaaggtgttg caaaagataa tgctaaaata      420
175 gctggtgcc cttaaagcaa tcctgaagaa ccagagagtg aagatgcaga tcaactgcacc      480
176 gtacccaaaa atgaaagtcc ctacacaggac attagtgatg cctgtgaagc agaaagtaca      540
177 gagaggtgcg ggaatgcaga acatccaagt cagaccatca ggaaagcttt agacagcaat      600
178 agcctaaaaa accatgactt gttggcacca ggaggagagc cgggggactt caatccagaa      660
179 agcagagaag ataccagagg agggaacgag aaggggcaaaa gcaaagaaga ccgtaccatg      720
180 tcctaagctg aggcaggcgg caggcgtggt gcacaggaag tctgagtgtg aggggctctt      780
181 ttctctccac tgccaatgac agcctttcct gcctcagggg agaagagaga gacagactac      840
182 agtgatggag acccactaga tgtgcacaag aggctgccat ccagtactgg agaggaccga      900
183 gccgtgatgc tggggtttgc catgatgggc ttctcagtcg taatgttctt cttgctcgga      960
184 acaaccattc taaagccttt tatgtctcagc attcagagag aagaatcgac ctgcactgcc      1020
185 atccacacag atatcatgga cgactggctg gactgtgcct tcacctgtgg tgtgcactgc      1080
186 cacggtcagg ggaagtaccc gtgtcttcag gtgtttgtga acctcagcca tccaggtcag      1140
187 aaagctctcc tacattataa tgaagaggct gtccagataa atcccaagtg cttttacaca      1200
188 cctaagtgcc accaagatag aaatgatttg ctcaacagtg ctctggacat aaaagaattc      1260
189 ttcgatcaca aaaatggaac ccccttttca tgcttctaca gtccagccag ccaatctgaa      1320
190 gatgtcattc ttataaaaaa gtatgaccaa atggctatct tccactgttt attttggcct      1380
191 tcactgactc tgctaggtgg tgccctgatt gttggcatgg tgagattaac acaacacctg      1440
192 tccttactgt gtgaaaaata tagcactgta gtcagagatg aggtaggtgg aaaagtcctt      1500
193 tatatagaac agcatcagtt caaactgtgc attatgagga ggagcaaagg aagagcagag      1560
194 aaatcttaag acggtggcca aattaaagtg ctggccttca gatgtctgtg atttctgcaa      1620
195 ctcgagtatg cg                                     1632
197 <210> SEQ ID NO: 6
198 <211> LENGTH: 257
199 <212> TYPE: PRT
200 <213> ORGANISM: Homo Sapiens
202 <400> SEQUENCE: 6
203 Met Thr Ala Phe Pro Ala Ser Gly Lys Lys Arg Glu Thr Asp Tyr Ser
204 1          5          10          15
205 Asp Gly Asp Pro Leu Asp Val His Lys Arg Leu Pro Ser Ser Thr Gly
206          20          25          30
207 Glu Asp Arg Ala Val Met Leu Gly Phe Ala Met Met Gly Phe Ser Val
208          35          40          45
209 Leu Met Phe Phe Leu Leu Gly Thr Thr Ile Leu Lys Pro Phe Met Leu
210          50          55          60
211 Ser Ile Gln Arg Glu Glu Ser Thr Cys Thr Ala Ile His Thr Asp Ile
212 65          70          75          80

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213 Met Asp Asp Trp Leu Asp Cys Ala Phe Thr Cys Gly Val His Cys His
214           85                      90                      95
215 Gly Gln Gly Lys Tyr Pro Cys Leu Gln Val Phe Val Asn Leu Ser His
216           100                     105                     110
217 Pro Gly Gln Lys Ala Leu Leu His Tyr Asn Glu Glu Ala Val Gln Ile
218           115                     120                     125
219 Asn Pro Lys Cys Phe Tyr Thr Pro Lys Cys His Gln Asp Arg Asn Asp
220           130                     135                     140
221 Leu Leu Asn Ser Ala Leu Asp Ile Lys Glu Phe Phe Asp His Lys Asn
222 145           150                     155                     160
223 Gly Thr Pro Phe Ser Cys Phe Tyr Ser Pro Ala Ser Gln Ser Glu Asp
224           165                     170                     175
225 Val Ile Leu Ile Lys Lys Tyr Asp Gln Met Ala Ile Phe His Cys Leu
226           180                     185                     190
227 Phe Trp Pro Ser Leu Thr Leu Leu Gly Gly Ala Leu Ile Val Gly Met
228           195                     200                     205
229 Val Arg Leu Thr Gln His Leu Ser Leu Leu Cys Glu Lys Tyr Ser Thr
230           210                     215                     220
231 Val Val Arg Asp Glu Val Gly Gly Lys Val Pro Tyr Ile Glu Gln His
232 225           230                     235                     240
233 Gln Phe Lys Leu Cys Ile Met Arg Arg Ser Lys Gly Arg Ala Glu Lys
234           245                     250                     255
235 Ser

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238 <210> SEQ ID NO: 7

239 <211> LENGTH: 1759

240 <212> TYPE: DNA

241 <213> ORGANISM: Human

243 <400> SEQUENCE: 7

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244 cccagctact cgggaggctg aggcaggaga atcgcttgaa cctgggaggc ggaggaggtt      60
245 gcagtgaact gagatcgta cccagcctggg caacagtgcg aggcctcgtc tcaaaaaaaaa 120
246 accaaaaaac acaaaaaaca aaaacgacag agaaggccaa acaaaacaca tctgtgggct 180
247 ggatgccgcc atgccaccg gtttgcgacc tttgtgttg actttttgt tcaccagaca 240
248 cctgcccctg cgagaatgta tctcatcctt tgctggagca ggtttgcagg cacagtggag 300
249 agaggagaga agaaatgaag ggacacttat gcagaacctat gaggggccag agaggaggag 360
250 aaggagggtg agaggagcaa agaagccatg acaacttcat aattctgagt ggactgggca 420
251 gtggccagaa attctgggtg tggatatgct gcctttccaa cagggtgaata tgaaagaata 480
252 agtcaaaccg tggtcaggac gctgttaatt ccaaagtga actttttgag tcattctttt 540
253 catgtggaat tcaaaggaga atgtaaacaa attttcagga gggacgtgca atatccctga 600
254 aagataacag agttcgtaac acttattttac atacaacatt ctctagttat tgattaaaca 660
255 gatctctaca gacttgcatt aggcaacatt tottaggctt gtttgctaca atatctttaa 720
256 aaatacttga ttacacatca ctttagctta tttagatgga cttttcacca agctctgaac 780
257 tgggatttca ttttgttgca ttcattcctg tcacgagaca caggtaggca gcaaatagaga 840
258 ttatccctcc agtccccatg gattggaaat gtccccctt ctttatgagc tctactgcagt 900
259 atctccttct ccttttcccc aaaggacagc ctttcctgcc tcagggaaga agagagagac 960
260 agactacagt gatggagacc cactagatgt gcacaagagg ctgccatcca gtactggaga 1020
261 ggaccgagcc gtgatgctgg ggtttgccat gatgggcttc tcagtcctaa tggtcttctt 1080
262 gctcggaaca accattctaa agccttttat gctcagcatt cagagagaag aatcgacctg 1140
263 cactgccatc cacacagata tcatggacga ctggctggac tgtgccttca cctgtggtgt 1200
264 gcactaccac ggtcagggga agtaccctgt tcttcagggtg tttgtgaacc tcagccatcc 1260

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RAW SEQUENCE LISTING ERROR SUMMARY
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Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:20; N Pos. 27687,40467,40468,40469,40470,40471,40472,40473,40474,40475
Seq#:20; N Pos. 40476,40477,40478,40479,40480,40481,40482,40483,40484,40485
Seq#:20; N Pos. 40486,40487,40488,40489,40490,40491,40492,40493,40494,40495
Seq#:20; N Pos. 40496,40497

VERIFICATION SUMMARY

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L:960 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:27660
L:1173 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:40440